William Foy

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EDUCATION

Carnegie Mellon University | B.S. in Electrical and Computer Engineering — Pittsburgh, PA
Intended Minor in Software Engineering, QPA: 3.89/4.0 — Expected May 2022

RELEVANT COURSEWORK

Software Construction	Data Structures	Digital Systems
Computer Systems	Software Engineering for Startups	Android Development

INDUSTRY EXPERIENCE

Booz Allen Hamilton | Reverse Engineering Intern — Fort Meade, MD
Summer 2019

- Performed full security analysis on network-attached storage device
- Reverse engineering of firmware update binaries
- Automation of custom firmware modification

Booz Allen Hamilton | Cybersecurity Intern — Fort Meade, MD
Summer 2018

- Performed security audit on a commercial mesh Wi-Fi router
- Exploited multiple web client vulnerabilities

PROJECTS

Research Assistant at CMU Robotics Institute — Pittsburgh, PA
Fall 2019

- Testing of Husky UGV performance and energy consumption
- Development of multi-threaded UGV control GUI using Python with PyQT

Defense against Quadcopter Security Vulnerabilities — Aberdeen, MD
Fall 2017 - Spring 2018

- Capstone project with Booz Allen Hamilton mentor
- Implemented WPA2 Wi-Fi protocol and SSH server onboard Parrot AR.Drone 2.0
- Cross-compiled software for ARM, including wpa_supplicant and Dropbear

Autonomous Racecar Project (MIT Beaver Works Summer Institute) — Cambridge, MA
Summer 2017

- Developed software for miniature racecars to navigate an obstacle-filled course
- Utilized control systems and computer vision through integration of Python with ROS

SKILLS

Languages: C/C++ ▪ Java ▪ Bash ▪ Python ▪ HTML ▪ CSS
Tools: Git ▪ Unix ▪ Vim ▪ LaTeX
Software: Ghidra ▪ IDA ▪ ROS ▪ Android Studio

EXTRACURRICULAR ACTIVITIES

Scotty Labs

- Project lead on development of mentor queue system for TartanHacks 2020

Plaid Parliament of Pwning (PPP) at Carnegie Mellon University

- Participation in Capture-the-Flag competitions

Carnegie Mellon Racing

- Aided in development of firmware for Formula SAE electric racecar
- Worked with RTOS and PWM signals for fan speed control

HONORS

College of Engineering Dean's List, Fall 2018 and Spring 2019